

What is claimed:

CLAIMS

1. A computer program product, comprising:

a computer readable medium;

computer program instructions stored on the computer readable medium that, when processed by a computer, instruct the computer to perform a method for implementing a graphical user interface for editing a three-dimensional animation comprising an animation element with associated animation parameters, wherein the animation parameters define animation of a three-dimensional object over time, the method comprising:

displaying a clip object corresponding to the animation element, wherein the clip object is displayed in a track in a timeline and has a start position and an end position relative to said timeline, wherein the start position and the end position define a duration of the clip object, wherein the duration of the clip object defines the animation parameters associated with the animation element;

rendering the animation element to produce a first rendered sequence of two dimensional animation frames in accordance with the animation parameters as defined by the duration of the clip object;

compositing the first rendered sequence of two-dimensional animation frames with at least one other clip object representing another sequence of two-dimensional frames to produce a representation of the three-dimensional animation;

allowing a user to modify the duration of the clip object corresponding to the animation element by manipulating at least one of the start position and the end position of the clip object, whereby the animation parameters associated with the animation element corresponding to the clip object are modified according to the modified duration of the clip object;

rendering the animation element corresponding to the clip object in accordance with the animation parameters as defined by any modification to the duration of the clip object to produce a second rendered sequence of two dimensional animation frames; and

compositing the second rendered sequence of two-dimensional animation frames with the at least one other clip object representing the other sequence of two-dimensional frames to produce a representation of the three-dimensional animation.

2. The computer program product of claim 1, wherein the three dimensional object is defined by information defining a skeleton and skin of the three dimensional object in three dimensions and the animation is defined by position and motion information of the three dimensional object in three dimensions.
3. The computer program product of claim 2, wherein the method further comprises modifying the animation parameters according to the modified duration of the clip object such that speed of the three dimensional object in the animation is modified.
4. The computer program product of claim 3, wherein the method further comprises modifying the animation parameters according to the modified duration of the clip object such that a position of the three dimensional object in the animation is modified.
5. The computer program product of claim 1, wherein the method further comprises modifying the animation parameters according to the modified duration of the clip object such that speed of the three dimensional object in the animation is modified.
6. The computer program product of claim 5, wherein the method further comprises modifying the animation parameters according to the modified duration of the clip object such that a position of the three dimensional object in the animation is modified.
7. The computer program product of claim 1, wherein the method further comprises modifying the animation parameters according to the modified duration of the clip object such that a position of the three dimensional object in the animation is modified.